Electronic Version
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IN-SITU MONITORING AND CONTROLLING SYSTEM FOR CHEMICAL VESSELS OR TANKS

Abstract

An in-situ and real-time monitoring and controlling system for chemical vessels, tanks, reactors or the like is disclosed. The chemical vessels, tanks, or reactors are employed to contain high-purity corrosive chemicals such as acids, alkaline liquids or the like. The monitoring and controlling system encompasses a vessel including a conductive shell and insulating interior lining coated therein. A robust detection electrode is dipped into the chemical liquid contained by the vessel. The detection electrode is electrically connected to a measurement means such as an ohmmeter that is mounted outside the vessel. The measurement means is further electrically connected to the conductive shell. When the interior lining is pitted due to the chemical attack by the chemical liquid and the chemical liquid contacts the conductive shell, the measurement means promptly receives a corresponding signal. According to one preferred embodiment, the measurement means is further connected to a controller unit that can control a semi-

conductor-processing unit.